

Remarks

In the official action, the Examiner rejects all of the claims as allegedly being anticipated by US Patent No. 5,737,614 to Durham. This grounds for rejection is respectfully traversed.

Since the rejection made by the Examiner is under 35 U.S.C. 102, that means that the prior art patent, namely Durham, must teach each and every limitation of each and every rejected claim for the rejection to stand up.

Turning briefly to claim 1, claim 1 recites, among other things, "regulating said voltage according to the measured instantaneous power." The Examiner asserts that this limitation is anticipated at column 1, lines 43-60 of Durham and in Durham's abstract.

However, at those points in Durham, neither the word "volt" nor the word "voltage" can be found. Since the Examiner is rejecting the claim under 35 U.S.C. 102, exactly what element or elements in the Durham patent allegedly anticipate the language quoted above?

Indeed, it appears that Durham has nothing whatsoever to do with regulating the voltage applied by a voltage regulator to an integrated circuit according to the measured instantaneous power consumption inside the integrated circuit. Rather, Durham apparently regulates a clock frequency in very high frequency self-timed circuits having plural pipeline stages in order to control their power consumption. Durham is concerned with chips overheating. See column 1, lines 6-24.

Since claim 1 is not anticipated by Durham, that means that the claims that depend on claim 1 also are not anticipated. Nevertheless, it is believed that considering some of the dependent claims might be helpful. The Examiner is invited to turn to claim 2. Claim 2 recites "sensing power consumption in at least two of said units" and "computing instantaneous power consumption inside of the integrated circuit according to the sensed power consumption in said units." In rejecting this claim, the Examiner points to

Durham's sensor 200. How does the single sensor 200 shown in Figure 3a of Durham meet the limitation "computing instantaneous power consumption inside of said integrated circuit according to the sensed power consumption in said units"? Where is there any teaching that sensor 200 computes anything?

Turning to claim 3, claim 3 recites that "sensing power consumption in a unit comprises detecting state changes in signals output by said unit." Where is that feature shown in Durham? The Examiner points the Applicant again to sensor 200, but how does sensor 200 meet the limitation of "detecting state changes in signals output by said unit"?

Does the Examiner believe that sensor 200 of Durham has anything other than a binary output? See column 5, lines 53-54 of Durham. Since Durham's sensor appears to do nothing more than sense an overpower condition, how does that possibly meet the "calculating instantaneous power consumption" limitation of claim 2 or the "detecting state changes in signals output by said unit" of claim 3?

Turning to claim 6, claim 6 recites "a power calculation unit for receiving the power consumption measured by each of said sensors and computing a power consumption for the circuit." Where is that shown by Durham? The Examiner points the Applicant again to sensor 200, but as already noted, sensor 200 appears to be nothing more than a device which trips when it notes an excessive power condition, such as might be triggered when a device gets too hot. With that disclosure, how does that possibly meet the "power calculation unit" limitation of claim 6? Or the "each of said sensors" limitation of claim 6?

New claims 17-22 are added by this response. Claim 17 differentiates itself from Durham by reciting "a power supply delivering current within a voltage range to said integrated circuit, the power supply being at least partially responsive to an increase in instantaneous power sensed inside the integrated circuit for increasing voltage supplied thereby before additional power is provided by the power supply to said integrated circuit in response to an increase in demand for current by said integrated circuit."

Newly dependent claim 20 differentiates itself from Durham at least by the recitation "adjusting the drive signal regulating said voltage according to the measured instantaneous power prior to the integrated circuit demanding additional current from said voltage regulator."

Certain claims are amended by this response to delete unnecessary reference numerals. This amendment is not related to the patentability of the claims nor does it narrow these claims in any way.

Reconsideration of this application as amended is respectfully requested.

The Commissioner is authorized to charge any additional fees which may be required or credit overpayment to deposit account no. 08-2025. In particular, if this response is not timely filed, then the Commissioner is authorized to treat this response as including a petition to extend the time period pursuant to 37 CFR 1.136 (a) requesting an extension of time of the number of months necessary to make this response timely filed and the petition fee due in connection therewith may be charged to deposit account no. 12-0415.

I hereby certify that this correspondence is being deposited with the United States Post Office with sufficient postage as first class mail in an envelope addressed to Commissioner for Patents

POB 1450, Alexandria, VA 22313-1450 on

August 23, 2004

(Date of Deposit)

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August 23, 2004

(Date)

Respectfully submitted,



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